CLEAN VERSION OF ALL CLAIMS

An oligomerization catalyst for olefins, obtainable from a chromium compound CrX_3 and the at least equimolar amount, based on the chromium compound CrX_3 , of a ligand L or from an existing chromium complex CrX_3L , in which the groups X are, independently of one another, abstractable counterions and L is a 1,3,5-triazacyclohexane of the formula I

 $\begin{array}{c|c}
R^5 & R^2 \\
R^1 & N & R^6 \\
R^9 & N & R^7
\end{array}$

where the groups R^1 to R^9 are, independently of one another: hydrogen or organosilicon or substituted or unsubstituted carboorganic groups having from 1 to 30 carbon atoms, where two geminal or vicinal radicals R^1 to R^9 may also be joined to form a five- or six-membered ring, and

- at least one activating additive from the group:
- i) an unsubstituted or substituted five-membered aromatic N-heterocycle and at least one aluminum alkyl, some of whose alkyl groups may have been replaced by halogen and/or alkoxy,

b)

Sulga

ii) an alkylalumoxane.

2. An oligomerization catalyst as claimed in claim 1, wherein the groups R^1 , R^2 and R^3 in the 1,3,5-triazacyclohexane I are, independently of one another, substituted or unsubstituted C_1-C_{12} -alkyl, C_6-C_{15} -aryl or C_7-C_8 -arylalkyl.

- 3. An oligomerization catalyst as claimed in claim 1, wherein the groups R^1 , R^2 and R^3 in the 1,3,5-triazacyclohexane I are, independently of one another, substituted or unsubstituted C_1-C_{12} -alkyl or C_7-C_8 -arylalkyl.
- 4. (amended) An oligomerization catalyst as claimed in claim

 1, wherein the groups R, 6R, 7R8, R and R in the

 1,3,5-triazacyclohexane are independently of one another,

 hydrogen or methyl
 - 5.[(1,3,5-Tris(2-n-propylheptyl)-1,3,5-triazacyclohexane)CrCl₃].
 - 6. [(1,3,5-Tris(2-ethylhexyl)-1],3,5-triazacyclohexane) CrCl₃].

carbon atoms by reaction of an olefin or a mixture of olefins at from 0 to 150°C and pressures of from 1 to 200 bar in the presence of an oligomerization catalyst as claimed in claim 1.

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